

Pipunculid records from France (Diptera : Pipunculidae)

Marc DE MEYER, Etienne BRUNEL & Patrick GROOTAERT

Samenvatting. Pipunculidae-gegevens uit Frankrijk (Diptera : Pipunculidae)

De auteurs vermelden het voorkomen van 11 Pipunculidae uit Frankrijk, verzameld met malaisevallen in Rennes en Le Rheu (Bretagne) tijdens 1992. Drie soorten, *Chalarus latifrons* HARDY, *Eudorylas obliquus* COE en *Eudorylas ruralis* (MEIGEN) zijn nieuw voor de Franse fauna.

Résumé. Données faunistiques au sujet des Pipunculidae de la faune française (Diptera: Pipunculidae)

Les auteurs signalent la présence de 11 espèces de Pipunculidae de France, récoltées à Rennes et Le Rheu (Bretagne) au moyen de pièges malaise au cours de l'année 1992. Trois espèces sont nouvelles pour la faune française: *Chalarus latifrons* HARDY, *Eudorylas obliquus* COE et *Eudorylas ruralis* (MEIGEN).

Abstract. Pipunculid records from France (Diptera : Pipunculidae)

The authors report the occurrence of 11 pipunculid species from France, collected by malaise traps at Rennes and Le Rheu (Britanny) during 1992. Three species, *Chalarus latifrons* HARDY, *Eudorylas obliquus* COE et *Eudorylas ruralis* (MEIGEN) are new to the French fauna.

De Meyer, M.: National Museums of Kenya, Dept Invertebrate Zoology, P.O. Box 40658, Nairobi, Kenya.

Brunel, E.: I.N.R.A., Domaine de la Motte au Vicomte, B.P. 29, F-35650 Le Rheu, France.

Grootaert, P.: Koninklijk Belgisch Instituut voor Natuurwetenschappen, Dept Entomologie, Vautierstraat 29, B-1040 Brussel, Belgium.

Introduction

Pipunculidae are small dark flies, recognized by the large compound eyes which occupy most of the hemispherical head. The larval stages are parasitoids of Auchenorrhyncha, Homoptera. DE MEYER (1992) gave a review of the distribution of Pipunculidae (except the genus *Chalarus*) in Europe. In the list, only 30 species are recorded for France. Recently, JERVIS (1992) published a revision of the genus *Chalarus* where he also reports 4 species from France. This brings the total to 34 species. In comparison to data from neighbouring countries it shows that the pipunculid fauna of France is poorly known. Therefore, when pipunculid material collected in Bretagne, was put at our disposal, it was not surprising to find a few new faunistic records for the country.

The present study is based on samples taken with Malaise traps at two different sites in Bretagne:

-Le Rheu: a garden (20.000 m²) containing ornamental plants and scrubs and bordered on one side by a small wood of mainly deciduous trees.

-Rennes: a kitchen garden (2.000 m²) with several vegetables (carrots, beets, leek, artichokes) and cereals. It is mainly enclosed by meadows and bordered on one side by an arboretum.

The traps were active from June till September 1992. The numbers caught are summarized in Table 1.

Results

In all, 158 specimens were collected belonging to 11 species. The faunal composition of both traps seems to be quite similar (see Table 1). However, similarity coefficients do not confirm this (Jaccard coefficient: 0.54; Canberra: 0.79; Bray-Curtis: 0.62; see CLIFFORD & STEPHENSON 1975). It seems, this is mainly due to the absence of several species in the catches of Le Rheu. It concerns here mainly species that were present by a few specimens in the Malaise trap at Rennes (except for *Chalarus brevicaudis*). The overall number of specimens in the catches of Le Rheu was also distinctly lower than in the one of Rennes (54 against 104).

Although the number of species is fairly limited, some species are noteworthy and three were not previously mentioned for the French fauna. These interesting species are discussed shortly below.

Chalarus latifrons HARDY, 1943

New to the French fauna. This species was originally described from the Nearctic region (U.S.A.: Arizona) but is found throughout northern and western Europe, as well as the former Czechoslovakia (JERVIS 1992). All our specimens were collected during the end of July and the month of August.

Chalarus longicaudis JERVIS, 1992

JERVIS (1992) described this species from France (Vienne, Vivonne) and also reported specimens from Lannemezan, Hautes-Pyrénées. In addition, the species is recorded from Belgium and Sweden.

Eudorylas obliquus COE, 1966

New to the French fauna. *E. obliquus* is mainly found in West and Central Europe, as well as in Italy. It seems to be absent in northern Europe. Only one specimen was found in Rennes at the beginning of June.

Eudorylas ruralis (MEIGEN, 1824)

New to the French fauna. Like the previous species, mainly recorded from West and Central Europe. It is easily differentiated from other *Eudorylas* spp. by the large abdominal tergum 5, bearing no membraneous area.

Eudorylas zermattensis (BECKER, 1898)

This species is widespread throughout Europe but not very common. However, in the material from Rennes and Le Rheu combined, it is the most abundant species (see Table 1). It seems to be bivoltine, with a first peak period at the end of June till the first half of July and a second generation in August.

Pipunculus campestris LATREILLE, 1805

Although a very common species, we would like to mention it here because of the data on its seasonal occurrence. As pointed out in DE MEYER & DE BRUYN (1989) the voltinism of this species can differ, depending on the geographical position and the climatological conditions. In the malaise trap material from Rennes and Le Rheu, it was a common species and showed a distinct bivoltinism, similar to *E. zermattensis*: a first period at the end of June, beginning of July, and a second period in August.

Table 1. Pipunculidae captured at Rennes and Le Rheu (Bretagne, France) during 1992 with Malaise traps.

SPECIES	RENNES	LE RHEU
<u>Chalarus brevicaudis</u> JERVIS	14	-
<u>Chalarus latifrons</u> HARDY	6	1
<u>Chalarus longicaudis</u> JERVIS	3	-
<u>Chalarus spurius</u> (FALLEN)	2	-
<u>Pipunculus campestris</u> LATREILLE	45	2
<u>Cephalops ultimus</u> (BECKER)	2	-
<u>Eudorylas obliquus</u> COE	1	-
<u>Eudorylas ruralis</u> (MEIGEN)	1	5
<u>Eudorylas zermattensis</u> (BECKER)	23	38
<u>Tomosvaryella geniculata</u> (MEIGEN)	1	6
<u>Tomosvaryella kuthyi</u> ACZEL	6	2
TOTAL	104	54

References

- Clifford, H.T. & Stephenson, W., 1975. *An introduction to numerical classification*. New York/London, 229 pp.
- De Meyer, M., 1992. Preliminary database on the distribution of Pipunculidae (Diptera) in Europe. - *Proc. 8th int.Coll. E.I.S., Brussels*: 91-100.
- De Meyer, M. & De Bruyn, L., 1989. Seasonal occurrence and voltinism of Pipunculidae (Diptera) in Belgium. - *Bull.Inst.r.Sci.Nat.Belg., Entomologie* **59**: 99-130.
- Jervis, M.A., 1992. A taxonomic revision of the pipunculid fly genus *Chalarus* Walker, with particular reference to the European fauna. - *Zool.J.Linn.Soc.* **105**: 243-352.